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SUPERFUND &
EMERGENCY
MANAGEMENT DIVISION

August 3, 2020

Sent via email only

Ms. Chris Budai
Project Manager
USACE, Portland District
333 SW First Ave.
Portland, OR 97204

RE: July 1, 2020 Clam, Crayfish, and Small Mouth Bass Quality Assurance Project Plans

Dear Chris:

This letter is to provide comments for consideration for the subject Quality Assurance Project Plans (QAPPs) as discussed on July 14 and August 3, 2020. EPA appreciates USACE's efforts to further characterize the site with various sampling media and their collaboration with the government team in terms of how best to do so. It is EPA's hope that working through the following comments will not only better provide data to support remedial action objective achievement evaluation, but also avoid disagreements over the interpretation of the data:

DQOs

1. Data quality objectives require further refinement. It seems that nature and extent is the primary objective with an updated view of current site risks as an additional objective. Understanding these objectives and framing the interpretation of this data before program execution is crucial to best eliminate bias in the sampling design, and better ensure consensus on later interpretation. DQOs should be further refined before FSP development to ensure consistent sampling design, e.g. size of the fish being collected, fish tracking timing relative to foraging behavior trying to be explained, etc.
2. DQOs should be developed in light of overall RAOs and lines of evidence associated with them, e.g. various species home ranges and COC distributions in those exposure units. For example, if SMB exhibit acceptable (ie. equivalent to background) levels, what other species will be scrutinized to express achievement of RAOs? Over what spatial area? This information is critical to establishment of appropriate strata and decision units to evaluate over time.

Clams

3. If possible, it would be useful to archive individual samples (ie. 30 clams) before compositing for nature and extent purposes to be run later, if possible, based on criteria developed beforehand that might be useful for source area definition.
4. It is unclear to me if sufficient lack of spatial bias exists to directly compare each data set, e.g. for clams between 2011 and 2020 are the study designs in terms of randomization similar enough to allow for an unqualified comparison? If additional steps are necessary to de-bias previous data, that would be helpful to spell out here and agree upon.
5. It is unclear what the data objective is for "reoccupation of historic sampling locations" and what conclusions USACE believes can be derived from doing so? Rather it seems the goal should be to represent each strata and sub areas with an appropriately random

sample collection to compare areas between time steps while being as free as possible from spatial bias. This may be the intent of the study but hopefully the underlying approach can be clarified relative to removing as much spatial bias as possible before dataset comparison.

Other COCs

6. While DQOs may not involve collection of information on all COCs for each species at this time to prioritize limited resources perhaps to the nature and extent DQO, it should be stated that source information is not well understood for non PCB COCs that need to be carried forward, particularly if non PCB COCs begin to drive risk potentially in certain areas.

Other Species

7. Given that nature and extent is still of [highest] interest, and clams do not uptake the full range of site COCs except at very high levels, foregoing Cascade Locks SMB reference area sampling in favor of another species that do uptake a broader range of COCs over a smaller home range collected in the forebay, such as sculpin and additional crayfish, is recommended. These species can both service updated risk evaluations as well as the primary nature and extent objective. In addition, additional sample numbers in the forebay area will be more useful in increasing the statistical power of these datasets. When reference area information is needed to evaluate whether SMB at the source area have reached achievable anthropogenic background levels, an equivalence approach should be developed with an appropriate dataset that has been scrubbed of outliers to evaluate achievement of RAOs for tissue and other media. For example, it seems that Cascade locks has several clear outliers. In the future, outliers should be discarded per the dataset per EPA guidance.

Small Mouth Bass

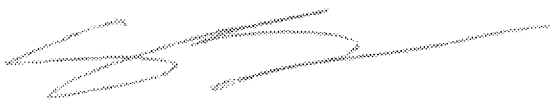
8. There seem to be very distinct populations amongst PCB SMB tissue results in the forebay. This could be utilized in the future as a nearby reference area for the purposes of reaching equivalence, but how this is interpreted should be agreed upon beforehand.
9. Acoustic tracking. As much as this would be very interesting information, reconfirming the home range and level of movement during foraging of small mouth bass without seeing the specific tissue COC levels for certain behaviors may not answer any of the fundamental study questions above, as SMB are a poor indicator of potentially small source area(s) as theorized in the CSM. Perhaps these resources would be better focused in collection of sculpin, added craysfish, and clams around Bradford Island where possible.

Crayfish

10. Crayfish traps. Some discussion of treatment of salmonid bycatch should be added here and reviewed by NMFS staff to ensure adequacy of proposed BMPs.

EPA very much appreciates USACE's discussions on data quality objectives and methodologies for these QAPPs. Please let me know if you have any questions or concerns at (206) 553-1220 or via email at Sheldrake.sean@epa.gov.

Sincerely,



Sean Sheldrake, RPM

Cc: Technical Advisory Group